Preliminary DRAFT North Lake Washington Chinook Population - Tier I - Initial Habitat Project List Includes Potential Restoration and Protection Projects by Reach. Bear Creek Upper Reaches 8-16

Ranking Notes:

- ☐ LWD Feasibility determined by ownership (H for public and M/L for private)
- ☐ Many non-specific restoration and protection projects received H Benefit Rankings and M/L feasibility until specific projects are identified.

Reach 8: Bear Creek from 133rd St (King County gage site) to 141st crossing Restoration

Project #	Reach #	Reach Restor. Benefit Rank	NTAA #	NTAA Name & Description	Approx. Cost	Notes, Key Uncertainties	Benefits to Chinook H, M. L	H, M, L
N226	8	3 of 7	3	Add Large Woody Debris to Bear Creek, particularly in areas that are already publicly owned in reach.			Н	Н
N227	8	3 of 7		Reforest 10-acre wetland area on golf course in reach that is part of dedicated open space for property.		Not sure if wetlands are hydraulically connected to creek.	М	M
N228	8	3 of 7	new	Restoration needed on Swanson Horse Farm property on NE 140th St. Reduce fine sediments, restore riparian areas. Pursue farm plan to address impacts to Bear Creek.			Н	M
N229	8	3 of 7	new	Determine whether or not ponds on golf course are hydrologically connected to Bear Creek and source of warm water. If found to add to temperature problems on the creek, recommend planting south side of ponds to shade them.		Rating assumes that the ponds are hydraulically connected to creek and access to land is granted.	Н	M
N230	8	3 of 7	new	Continue to work with private property owners in reach to restore riparian areas, increase in-channel complexity and add LWD.			Н	M/L

Technical Hypothesis: Protect pool habitat and the habitat features that support the creation of pools (lwd, riparian function, and channel connectivity),

and spawning habitat.

Project				NTAA	NTAA Name & Description	Approx.	Notes, Key Uncertainties	Benefits	Feasib
#	#	Protect. Benefit Rank	Protect. Priority (Y/N)	#	1177 (Hame & Description	Cost	riotes, rey checitamiles	to Chinook H, M. L	Н, М,
N231	8	5 of 7			Forest Cover Protection: Acquire forest property, development rights/conservation easements, and provide enhanced incentives to retain and plant forest area environments.			Н	M/L
N232	8	5 of 7	Y		Continue Bear Creek Waterways program to protect best remaining habitat. This reach includes "Reach D". In particular, forested riparian parcels contiguous to already protected properties. Also protect undeveloped properties that can be restored like the Swanson Horse Farm.		Property currently for sale on the north side of 133rd St includes five parcels but all owned by same owner.	H+	M
N233	8	5 of 7		new	Protect riparian forested buffers along Bear Creek.			Н	M/L
N234	8	5 of 7			Protect instream flows in reach. Begin by identifying legal and illegal water withdrawals.		Several strategies could be used to deal with illegal water withdrawals. Education, incentives and enforcement could all be used to achieve goals.	Н	L

Reach 9: Bear Creek from 141 St crossing to top end of beaver pond complex Restoration

Project #	Reach #	Reach Restor. Benefit Rank	NTAA #	NTAA Name & Description	Approx. Cost	Notes, Key Uncertainties	Benefits to Chinook H, M. L	Feasib. H, M, L
N235	9	2 of 7	3	Add Large Woody Debris to Bear Creek as opportunities arise in this reach.			Н	M/L
N236	9	2 of 7	new	Continue to work with private property owners in reach to restore riparian areas, increase in-channel complexity and add LWD.			Н	M/L
N237	9	2 of 7	new	Replant cleared, former pasture area in reach. Area is wetland so plant with appropriate trees for wetland environment (eg black cottonwood).		Unsure how many parcels/landowners this project would involve.	Н	M/L

Technical Hypothesis: Protect pool habitat and the habitat features that support the creation of pools (lwd, riparian function, and channel connectivity),

and spawning habitat.

Project #	Reach #	Reach Protect.	Existing Protect.	NTAA #	NTAA Name & Description	Approx. Cost	Notes, Key Uncertainties	Benefits to	Feasib. H, M, L
		Benefit Rank	Priority (Y/N)					Chinook H, M. L	
N238	9	3 of 7			Forest Cover Protection: Acquire forest property, development rights/conservation easements, and provide enhanced incentives to retain and plant forest area environments.			Н	M/L
N239	9	3 of 7	Y		Continue Bear Creek Waterways program to protect best remaining habitat. This reach includes "Reach D". In particular, pursue protection of the Grandstan property at the upstream end of this reach and undeveloped properties that could be restored.			Н	M/L
N240	9	3 of 7		new	Protect riparian forested buffers along Bear Creek.			Н	M/L
N241	9	3 of 7			Protect instream flows in reach. Begin by identifying legal and illegal water withdrawals.		Several strategies could be used to deal with illegal water withdrawals. Education, incentives and enforcement could all be used to achieve goals.	Н	L

Reach 10: Bear Creek from top end of beaver pond complex to confluence with Struve Creek Restoration

Project #	Reach #	Reach Restor.	NTAA #	NTAA Name & Description	Approx. Cost	Notes, Key Uncertainties	Benefits	Feasib. H, M, L
#	#	Benefit Rank			Cost		to Chinook H, M. L	
N242	10	1 of 7	3	Add Large Woody Debris to Bear Creek, particularly in areas that are already publicly owned in reach.			Н	Н
N243	10	1 of 7	new	Continue to work with private property owners in reach to restore riparian areas, increase in-channel complexity and add LWD.			Н	M/L
N244	10	1 of 7	new	On already protected properties in reach, underplant existing alder stands with conifers.		In process on King County land (planting fall 2004)	M	Н

Technical Hypothesis: Protect pool habitat and the habitat features that support the creation of pools (lwd, riparian function, and channel connectivity), and spawning habitat.

arra o									
Project	Reach	Reach	Existing	NTAA	NTAA Name & Description	Approx.	Notes, Key Uncertainties	Benefits	
#	#	Protect.	Protect.	#		Cost		to	H, M, L
		Benefit	Priority					Chinook	
		Rank	(Y/N)					H, M. L	
N245	10	4 of 7		new	Forest Cover Protection: Acquire forest property,			Н	M/L
					development rights/conservation easements, and provide				
					enhanced incentives to retain and plant forest area				
					environments.				
N246	10	4 of 7	Y	new	Continue Bear Creek Waterways program to protect best			н	M/L
11210					· · · · · · · · · · · · · · · · · · ·			•••	IVI/L
					remaining habitat. This reach includes "Reach B". There are				
					blocks of contiguous forested riparian area that should be				
					protected.				
	4.0				F				
N247	10	4 of 7		new	Protect riparian forested buffers along Bear Creek.			Н	M/L
N248	10	4 of 7		new	Protect instream flows in reach. Begin by identifying legal		Several strategies could be used to deal with illegal water	Н	L
							withdrawals. Education, incentives and enforcement could		_
					and illegal water withdrawals.		1		
							all be used to achieve goals.		

Reach 11: Bear Creek from confluence with Struve Creek to 158th Crossing Restoration

Project	Reach	Reach	NTAA #	NTAA Name & Description	Approx.	Notes, Key Uncertainties	Benefits	Feasib.
#	#	Restor.			Cost	, , , , , , , , , , , , , , , , , , ,	to	H, M, L
		Benefit					Chinook	
		Rank					H, M. L	
N249	11	7 of 7	3	Add Large Woody Debris to Bear Creek as opportunities			Н	M/L
				arise in this reach.				
N250	11	7 of 7	new	Continue to work with private property owners in reach to			Н	M/L
				restore riparian areas, increase in-channel complexity and add				
				LWD.				
N251	11	7 of 7	new	Remove bank hardening and restore riparian area at Tolt		This site is used for public fish viewing so the primary	М	Н
				Pipeline crossing.		benefit of this project would be an opportunity to educate		
				, , , , , , , , , , , , , , , , , , ,		the public about what good fish habitat looks like. King		
						County is planning to do some vegetation planting work		
						here this fall. Not sure about bank hardening. Also looking		
						into options for fencing and restricting equestrian access to		
						the creek.		
						the order.		

Technical Hypothesis: Protect pool habitat and the habitat features that support the creation of pools (lwd, riparian function, and channel connectivity),

and spawning habitat.

Project	Reach	Reach	Existing	NTAA	NTAA Name & Description	Approx.	Notes, Key Uncertainties	Benefits	Feasib.
#	#	Protect.	Protect. Priority	#	,	Cost		to Chinook	H, M, L
		Rank	(Y/N)					H, M. L	
N252	11	6 of 7			Forest Cover Protection: Acquire forest property, development rights/conservation easements, and provide enhanced incentives to retain and plant forest area environments.			Н	M/L
M253	11	6 of 7	Y		Continue Bear Creek Waterways program to protect best remaining habitat. This reach includes "Reach B".		There are many one-acre parcels in this reach so high potential for impacts from development.	Н	M/L
N254	11	6 of 7		new	Protect riparian forested buffers along Bear Creek.			Н	M/L
N255	11	6 of 7			Protect instream flows in reach. Begin by identifying legal and illegal water withdrawals.		Several strategies could be used to deal with illegal water withdrawals. Education, incentives and enforcement could all be used to achieve goals.	Н	L

Reach 12: Bear Creek from 158th Crossing to 160th crossing (lower end beaver pond complex) Restoration

Technical Hypothesis: Reduce fine sediment inputs, add LWD, restore riparian conditions.

Proje	ct Reach	Reach	NTAA #	NTAA Name & Description		Notes, Key Uncertainties	Benefits	Feasib.
#	#	Restor. Benefit			Cost		to Chinook	П, IVI, L
	12	Rank 4 of 7	new	No projects identified at this time.			H, M. L	

Protection

Technical Hypothesis: Protect pool habitat and the habitat features that support the creation of pools (lwd, riparian function, and channel connectivity), and spawning habitat.

Project Reach Reach Existing NTAA NTAA Name & Description **Benefits** Feasib Approx. Notes, Key Uncertainties Protect. Protect. Cost H, M, L Priority Benefit Chinook Rank (Y/N)H, M. L 12 7 of 7 new Forest Cover Protection: Acquire forest property, N256 Н M/L development rights/conservation easements, and provide enhanced incentives to retain and plant forest area environments. Particularly protect forest cover on the Granston property. 12 7 of 7 N257 Continue Bear Creek Waterways program to protect best Н M/L remaining habitat. This reach is part of Waterways "Reach

N258	12	7 of 7	new	Protect riparian forested buffers along Bear Creek.		Н	M/L
N259	12	7 of 7		Protect instream flows in reach. Begin by identifying legal and illegal water withdrawals.	Several strategies could be used to deal with illegal water withdrawals. Education, incentives and enforcement could all be used to achieve goals.	H	L

Reach 13: Bear Creek from 160th crossing (lower end beaver pond complex) to top of beaver pond complex Restoration

Technical Hypothesis: Reduce fine sediment inputs, add LWD, restore riparian conditions.

Project	Reach	Reach	NTAA #	NTAA Name & Description	Approx.	Notes, Key Uncertainties	Benefits	Feasib.
#	#	Restor.			Cost		to	H, M, L
		Benefit					Chinook	<
		Rank					H, M. L	
N260	13	6 of 7	3	Add Large Woody Debris to Bear Creek, particularly in areas			Н	Н
				that are already publicly owned in reach.				
				that are already publicly owned in reach.				
N261	13	6 of 7	new	Work with private property owners in reach to reduce water			M	M
				quality impacts of their landscaping practices.				
N262	13	6 of 7	new	Continue to work with private property owners in reach to			H	M/L
				restore riparian areas, increase in-channel complexity and add				
				LWD.				

Protection

Technical Hypothesis: Protect pool habitat and the habitat features that support the creation of pools (lwd, riparian function, and channel connectivity), and spawning habitat.

Project #	Reach #	Protect.	Existing Protect. Priority (Y/N)	#	NTAA Name & Description	Approx. Cost	Notes, Key Uncertainties	Benefits to Chinook H, M. L	H, M, L
N263	13	2 of 7	()		Forest Cover Protection: Acquire forest property, development rights/conservation easements, and provide enhanced incentives to retain and plant forest area environments.			H	M/L
N264	13	2 of 7	Y		Continue Bear Creek Waterways program to protect best remaining habitat. This reach is part of Waterways "Reach B".			Н	M/L
N265	13	2 of 7		new	Protect riparian forested buffers along Bear Creek.			Н	M/L
N266	13	2 of 7		new	Protect instream flows in reach. Begin by identifying legal and illegal water withdrawals.		Several strategies could be used to deal with illegal water withdrawals. Education, incentives and enforcement could all be used to achieve goals.	Н	L

Reach 14: Bear Creek from top of beaver pond complex to upper extent chinook in Bear Creek (0.5 miles upstream of Woodinville-Duvall Rd) **Restoration**

Technical Hypothesis: Reduce fine sediment inputs, add LWD, restore riparian conditions.

1 .	Reach #	Reach Restor.	NTAA #	NTAA Name & Description	Approx. Cost	Notes, Key Uncertainties	Benefits to	Feasib. H, M, L
#	"	Benefit Rank			Cost		Chinook H, M. L	
N267	14	5 of 7		Riparian planting in wetland area on the south side of Woodinville Duvall Road.		Site is publicly owned. King County project is in process.	H/M	Н

Protection

Technical Hypothesis: Protect pool habitat and the habitat features that support the creation of pools (lwd, riparian function, and channel connectivity),

and spawning habitat.

Project	Reach	Reach	Existing	NTAA	NTAA Name & Description	Approx.	Notes, Key Uncertainties	Benefits	Feasib.
#	#	Protect.	Protect.	#		Cost	, , , , , , , , , , , , , , , , , , ,	to	H, M, L
		Benefit	Priority					Chinook	
		Rank	(Y/N)					H, M. L	
N268	14	1 of 7	Υ	new	Continue Bear Creek Waterways program to protect best			Н	M/L
					remaining habitat. This reach is part of Waterways "Reach A				
					and B".				
N269	14	1 of 7		new	Forest Cover Protection: Acquire forest property,			Н	M/L
					development rights/conservation easements, and provide				
					enhanced incentives to retain and plant forest area				
					environments.				
N270	14	1 of 7		new	Protect riparian forested buffers along Bear Creek.			Н	M/L
					Trotoct Tiparian Toroctoa Danoro along Boar Grook.				
N271	14	1 of 7		new	Protect instream flows in reach. Begin by identifying legal		Several strategies could be used to deal with illegal water	Н	L
					and illegal water withdrawals.		withdrawals. Education, incentives and enforcement could		
					and megal water withdrawais.		,		
							all be used to achieve goals.		

Reach 15: Bear Creek from upper extent chinook (0.5 miles upstream of Woodinville-Duvall Rd) to Paradise Lk (presumed upper extent coho) Restoration

Project #	1	Reach Restor. Benefit Rank	NTAA #	NTAA Name & Description	Approx. Cost	Notes, Key Uncertainties	Benefits to Chinook H, M. L	H, M, L
	15		new	No project identified at this time.				

Technical Hypothesis: Protect pool habitat and the habitat features that support the creation of pools (lwd, riparian function, and channel connectivity), and spawning habitat.

ariu s								I	
Project	Reach	Reach	Existing	NTAA	NTAA Name & Description	Approx.	Notes, Key Uncertainties	Benefits	
#	#	Protect.	Protect.	#	'	Cost		to	H, M, L
			Priority					Chinook	
		Rank	(Y/N)					H, M. L	
N272	15		Υ	new	Continue Bear Creek Waterways program to protect best			Н	M/L
					remaining habitat. This reach is part of Waterways "Reach				
					A". In particular, protect Stevens and Dolittle properties.				
N273	15			new	Forest Cover Protections Assuirs forest property			Н	M/L
14273	10				Forest Cover Protection: Acquire forest property,				IVI/L
					development rights/conservation easements, and provide				
					enhanced incentives to retain and plant forest area				
					·				
					environments. In particular, acquire fee interests or				
					conservation easements in Snohomish County on forested				
					headwaters of Cottage Lake Creek and Bear Creek (700 acres				
					`				
					in four ownerships). Zoning is rural, 5-acre.				
N274	15			new	Protect riparian forested buffers along Bear Creek.			н	M/L
/ 1					Trotect riparian forested bullers along bear creek.			""	1V1/L
N275	15	,		new	Protect instream flows in reach. Begin by identifying legal		Several strategies could be used to deal with illegal water	Н	Ĺ
							withdrawals. Education, incentives and enforcement could		
					and illegal water withdrawals.		· · · · · · · · · · · · · · · · · · ·		
							all be used to achieve goals.		

Reach 16: Restoration

		<i>J</i> 1 · ·						
Project		Reach	NTAA #	NTAA Name & Description	Approx.	Notes, Key Uncertainties	Benefits	
#	#	Restor.		·	Cost		to	H, M, L
		Benefit					Chinook	
		Rank					H, M. L	
N276	16			Remove invasive plants and plant riparian buffer along Bear Creek through out Paradise Valley Conservation Area.		Currently no money is available to do this project.	Н	M/L

Technical Hypothesis: Protect pool habitat and the habitat features that support the creation of pools (lwd, riparian function, and channel connectivity), and spawning habitat.

ina spai								
Project Rea	ach Rea	ch Exist	ing NTA	NTAA Name & Description	Approx.	Notes, Key Uncertainties	Benefits	Feasib
# #	Prote Ben Rai	ect. Prote	ect. # rity		Cost		to Chinook H, M. L	H, M, L
N277 16		(1		Forest Cover Protection: Acquire forest property, development rights/conservation easements, and provide enhanced incentives to retain and plant forest area environments. In particular, acquire fee interests or conservation easements in Snohomish County on forested headwaters of Cottage Lake Creek and Bear Creek (700 acres in four ownerships). Zoning is rural, 5-acre.			H	Н
N278 16	6		nev	Protect instream flows in reach. Begin by identifying legal and illegal water withdrawals.		Several strategies could be used to deal with illegal water withdrawals. Education, incentives and enforcement could all be used to achieve goals.	Н	L
N279 16	6	Y	nev	Protect Paradise Valley , headwaters for Bear Creek. Ensure that protected property is used consistently with habitat protection.		Site is already in public ownership. There is an issue with bike trails on the site.	Н	H/M